

PROCEEDINGS  
OF THE  
UNITED STATES NATIONAL MUSEUM.

VOLUME XVIII.

1895.

DIAGNOSES OF NEW MOLLUSKS FROM THE SURVEY OF  
THE MEXICAN BOUNDARY.

By W. H. DALL,

*Honorary Curator of the Department of Mollusks.*

THE International Boundary Commission for the survey of the line between the United States and Mexico was accompanied by Dr. Edgar A. Mearns, U. S. A., who, with his associates, collected objects of natural history both along the line and from the ocean near its western terminus. A full report on the mollusks has been prepared by the writer, with suitable illustrations, but as this may be some time delayed in publication, waiting for the completion of other reports, the following diagnoses of new forms have been prepared.

Family HELICIDÆ.

PATULA STRIGOSA, Gould, var. CONCENTRATA, Dall.

Shell exactly mimicking the normal *P. strigosa*, with rounded whorls, but measuring only 13 mm. in minor and 16 mm. in major diameter, with a height of 8 mm.

Summits of the Hachita Grande and Huachuca Mountains, abundant.

EPIPHRAGMOPHORA ARIZONENSIS, new species

Shell small, moderately elevated; light brown, with a narrow brown band just above the periphery, mostly concealed by the suture, but visible internally in the aperture on the outer side; whorls four and a half, of which one and a half are nepionic and punctate, the remainder with

Proceedings of the United States National Museum, Vol. XVIII—No. 1033.

rather well-marked incremental lines and microscopic vermicular markings, of which the longer axes are subparallel to the lines of growth; suture distinct, whorls full and rounded, but with the periphery slightly above the middle, the last whorl descending a little near the aperture; base full and rounded; umbilicus narrow, deep; aperture expanded; the pillar lip reflected, but the outer lip not so. Height, 11; major diameter, 17; minor diameter, 13.5 mm.

*Locality*.—Banks of the Santa Cruz River, near Tucson, Arizona. Like *Arionta* var. *indioensis*, Yates, but smaller, with less oval aperture and narrower umbilicus. That species has the brown line not covered by the suture.

#### EPIPHRAGMOPHORA HACHITANA, new species.

Shell large, depressed, polished, sculptured with irregularly prominent, incremental lines, but without spiral striation or surface granulation; whorls four and a half, rounded; suture distinct; last whorl depressed near the peristome; aperture oblique, with a thickened and somewhat dilated but not reflected lip; pillar lip broad near the body; umbilicus moderate, deep, exhibiting nearly two whorls; the fresh shell livid waxen, or pale reddish-purple, with a single darker band, bordered by paler color, above the periphery. Major diameter, 26.5; minor diameter, 21; height, 12 mm.

*Locality*.—Hachita Grande Mountain, at an altitude of 8,270 feet, and in many other localities in the central region.

This resembles *E. magdalenensis*, Stearns, but is a much larger shell, and, when fresh, of a different color.

#### POLYGYRA CHIRICAHUANA, new species.

Depressed, thin and polished, dark brown, with five and a half whorls, and sculptured only with fine incremental lines; suture distinct, periphery rounded, with a constriction behind the peristome, which descends slightly; umbilicus deep, narrow; aperture oblique, with a narrow, livid, strongly reflected lip, which is somewhat flexuous and entirely destitute of internal teeth; body without teeth, the lips united by a thin smooth callus. Height, 7.7; major diameter, 18; minor diameter, 14.8 mm.

*Locality*.—Fly Park, Chiricahua Mountains, Arizona, at an elevation of 10,000 feet.

Like *P. levettei*, but larger and edentulous.

#### POLYGYRA MEARNsii, new species.

Shell pinkish-brown, depressed, five-whorled, sculptured only with fine lines of growth; spire much depressed, suture very distinct; periphery rounded, but above the middle of the whorl; base somewhat compressed, rounded; umbilicus deep and narrow; last whorl a little depressed and strongly constricted behind the peristome, which is

oblique and strongly reflected, united over the body by a well marked callus, on which are two converging but not united lamellae; basal part of the peristome with two distinct transverse lamellae, outer lip broader, receding with a single oblique tooth deeper in the aperture. Height, 5.5; major diameter, 13; minor diameter, 11 mm.

*Locality*.—Hachita Grande and Huachuca Mountains, New Mexico.

Distinguished from all other species by its three well-marked teeth on the outer lip.

### Family PUPIDÆ.

#### Genus HOLOSPIRA, Martens.

##### Subgenus HOLOSPIRA ss.

Axis with a plait in the penultimate whorl and with basal, parietal, and peripheral lamellae projecting into the lumen of that whorl.

Type, *H. pilocerei*, Pfeiffer. The subgenus includes also *H. goldfussii*, Pfeiffer, and *H. gonistoma*, Pfeiffer.

##### Section BOSTRICHOCENTRUM, Strebel and Pfeiffer.

Axis moderate, with a continuous plait nearly the whole length but with no lamellae.

Type, *H. tryoni*, Pfeiffer. *H. veracruzianus* also belongs here.

##### Section HAPLOSTEMMA, Dall

Axis moderate, with a short, stout, axial lamella in the penultimate whorl only.

Type, *H. mearnsii*, Dall.

##### Section EUDISTEMMA, Dall.

Penultimate whorl with a short axial and a parietal lamella only. Axis moderate. Type, *H. arizonensis*, Stearns.

##### Section DISTOMOSPIRA Dall

Penultimate whorl with a short, strong, axial and a basal lamella only. Axis moderate, smooth. Type, *H. bilamellata*, Dall.

##### Subgenus METASTOMA, Strebel and Pfeiffer.

Axis smooth, without plait or sinuosity, penultimate whorl without lamellae. Type, *H. roemerii*, Pfeiffer.

This comprises most of the species usually denominated *Holospira*.

##### Subgenus COELOSTEMMA, Dall.

Axis vertically ribbed as in *Coelocentrum*; shell otherwise as in *Metastoma*. Type, *H. elisabetha*, Pilsbry.

#### Genus COELOCENTRUM, Crosse and Fischer.

##### Subgenus SPARTOCENTRUM, Dall.

Axis as in *Bostrichocentrum*; otherwise as in the type of the genus. Type, *C. irregulare*, Gabb.

**HOLOSPIRA (METASTOMA) CROSSEI**, new species.

Shell small, compact, twelve-whorled, with two polished, smooth, blunt nuclear and four increasing whorls, followed by a cylindrical spire faintly transversely ribbed; suture distinct, base rounded with a shallow umbilical chink; aperture simple, slightly oblique, not projecting beyond the periphery of the preceding whorl, the lip entire, slightly expanded, without internal ridges. Height, 11; maximum diameter, 4 mm.

Top of Hachita Grande Mountain, New Mexico.

This resembles *H. goldfussii*, with an entirely different interior, and a less reflected and triangular peristome.

**HOLOSPIRA (METASTOMA) PILSBRYI**, new species.

Shell externally almost exactly like *H. tryoni*, Pfeiffer, as figured by Crosse and Fischer,<sup>1</sup> but that species has the internal characters upon which Strebel and Pfeffer based their section *Bostrichocentrum*. The present form has a height of 13 and a major diameter of 4 mm., and comprises two nuclear, six increasing, and six equal whorls.

Puebla, Mexico; Arizona, collected by Dr. Edward Palmer.

**HOLOSPIRA (DISTOMOSPIRA) BILAMELLATA**, new species.

Shell elongate, slender, blunt-tipped, with two smooth nuclear, six increasing, and nine subsequent equal whorls; sculpture of slightly raised, distant, straight riblets, obsolete on the middle of the shell, but strong on the last whorl, where they are crowded and rather irregular; umbilicus small, shallow; aperture as in *H. crossei*, but projecting beyond the periphery of the preceding whorl. Height, 20.5; maximum diameter, 5 mm.

Hachita Grande Mountain, New Mexico.

**HOLOSPIRA (HAPLOSTEMMA) MEARNSII**, new species.

Shell small, compact, with two nuclear, seven increasing, and five subsequent whorls; sculpture and aperture much as in *H. crossei*, the base slightly appressed and the ribs closer and more prominent than on the preceding whorls; umbilicus shallow; aperture projecting somewhat beyond the preceding whorl; the peristome hardly reflected, subtriangular, little thickened, and without folds internally; axis small, subcylindric, with a strong, short lamella near the base in the penultimate whorl; length, 14.5; major diameter, 4.5 mm.

Hachita Grande Mountain, New Mexico.

This resembles *H. crossei* externally, but is larger, with more projecting aperture.

**HOLOSPIRA (BOSTRICHOCENTRUM) VERACRUZIANA**, new species.

Shell closely resembling the enlarged figure of *H. microstoma*,<sup>2</sup> Pfeiffer, but with a shorter apical cone and larger aperture; it differs also by hav-

<sup>1</sup> Moll. Mexique.

<sup>2</sup> Crosse and Fischer, Moll. Mex., p. 337, pl. xvii, figs. 9, 9a.

ing 17 whorls in a total length of 17.5 mm., against 18 whorls in a length of 15.5 mm. for *H. microstoma*. The last whorl in the present species is rounded below, that of *H. microstoma* angulated. *H. veracruziana* has the one and a half nuclear whorls polished, those of the apical cone finely ribbed, those of the rest of the spire striate, with a few coarse riblets just behind the peristome.

*Locality*.—Mizantla, Province of Vera Cruz, Mexico.

### Family BULIMULIDÆ.

#### Genus BULIMULUS, Leach.

##### Subgenus PSEUDORHODEA, Dall.

Shell slender, small, with a gyrate and pervious axis in the last whorl and a half, without internal laminae; jaw as in *Thysanophora*. Type, *Columna ramentosa*, J. G. Cooper, Lower California.

This group has a superficial resemblance to the South American *Rhodea*, Adams, but an anatomical examination shows it to be most nearly related to the *Bulimuli* of the subgenus or section *Leptobyrsus*, especially *B. artemesia*, Binney.

##### BULIMULUS LEVIS, Dall.

*Bulimulus xantusi* var. *levis*, DALL, Proc. U. S. Nat. Mus., XVI, p. 641, 1893.—COOPER, Proc. Cal. Acad. Sci., 2d ser., IV, p. 139, pl. v, fig. 14.

Fresh specimens sent by Dr. Cooper show this to be perfectly distinct from *B. xantusi*.

##### BULIMULUS COOPERI, Dall.

*Bulimulus pilula*, CROSSE and FISCHER, not BINNEY; COOPER, Proc. Cal. Acad. Sci., 2d ser., IV, p. 139, pl. v, fig. 12, 1894.

This form, distinguished among other things by pale peripheral banding, is quite distinct from the true *B. pilula* of which the types are in the National Museum.

##### BULIMULUS BELDINGI, Cooper.

*Bulimulus inscendens beldingi*, J. G. COOPER, Proc. Cal. Acad. Sci., III, p. 209, 1892; p. 340, pl. XIII, fig. 5, 1893.

An examination of specimens sent by Dr. Cooper fails to show intermediate gradations between this species and *B. inscendens*. I have no doubt of its distinctness.

### Family UNIONIDÆ.

#### UNIO MITCHELLI, Simpson, new species.

Shell rhomboidal, solid, rather inflated, rounded before, somewhat biangulate behind; dorsal margin curved; incremental lines strong, anteriorly irregular; epidermis varying from light brown to black, coarse, often shining; beaks moderately prominent, showing traces of

rather strong concentric sculpture; cardinal teeth strong, short, rather ragged; laterals short, club-shaped, heavy, granular, or striated; nacre soft silvery white; shell near the beaks with obscure, narrow plications. Height, 33; length, 55; diameter, 20 mm.

*Locality*.—Guadalupe River, Victoria County, Texas, Hon. J. D. Mitchell; Rio Salado, near New Leon, Mexico.

This species probably groups with *Unio rowellii* and *scamnatius*, though no other members of the group have pustules or plications.

#### EPIPHRAGMOPHORA ARNHEIMI, Dall.

*Arionta californiensis*, LEA, var. *ramentosa*, GOULD, small variety, W. G. BINNEY, Bull. U. S. Nat. Mus., XXVIII, p. 133, fig. 108, 1885.

This small species has been referred to *californiensis* as a subvariety, but a series of forty-three very uniform specimens from various localities indicates that it is a distinct species.

*Type*.—No. 39612, U. S. N. M.; Nachoguero Valley, California, Dr. Means; San Pablo, Arnheim.

#### CERION (MAYNARDIA) PINERIA, new species.

Shell small, whitish, obliquely mottled with pale brownish flammules, sometimes nearly all brownish, with about eight whorls; nucleus smooth, brownish, of a whorl and a half, followed by fine, narrow, oblique, subequal riblets crossing the whorl, with about equal interspaces; apex dome-shaped; body of the shell subcylindrical, base slightly attenuated, with no umbilicus; aperture rounded, except over the body, with a thick, white, well-reflected lip, parietal and pillar lips each with a low medial tubercle or tooth; length of shell, 14; diameter, 6.5 mm.

This is nearest related to *Pupa cyclostoma*, Küster, but is small and easily distinguished by its finer, closer, and more even ribbing. Like all the species of its genus it is variable, and has among others a small variety with very regular ribbing which hardly exceeds 10 mm. in length, and is doubtless the smallest form belonging to the genus which has yet been reported.

*Type*.—No. 107329, U. S. N. M.; Isle of Pines, Johnson.